

National Renewable Energy Laboratory
Request for Proposals Number RDO-3-33457-00

“Zero Energy Homes (ZEH) Energy Supply Systems Integration”

REQUEST FOR PROPOSALS

READ THIS DOCUMENT CAREFULLY

This solicitation is being conducted under the streamlined procedures for competitive subcontracts established by the National Renewable Energy Laboratory (NREL).
NREL will award a subcontract based on the following.

- All Statement of Work (SOW) requirements being met
- The best combination of:
 - Technical factors (based on qualitative merit criteria)
 - and
 - Evaluated price

Issue Date: 04/24/03

Due Date: 05/28/03

Time Due: 4:00 p.m. Mountain Time

Technical Questions must be received in writing no later than May 5, 2003

1. **Solicitation Type** Best Value Selection
Fixed Price with Price Participation - Phased

Submit offers to and request information from the NREL RFP Contact below

2. **NREL RFP Contact** Victoria Nosal, Subcontract Administrator
MS 2713
National Renewable Energy Laboratory
1617 Cole Boulevard
Golden, CO 80401-3393
Phone: (303) 384-7325
Fax: (303) 384-7397
Email: victoria_nosal@nrel.gov

3. Project description

The Department of Energy's (DOE) Building Technologies Program has adopted the long-term goal of creating marketable buildings that produce all the energy that they use on an annual basis – Zero Energy Buildings. The ultimate goal of the residential Zero Energy Homes (ZEH) Energy Supply Systems Integration project is to develop the next generation of advanced building products that can generate 100% of the electric needs, 100% of the water heating needs, and 100% of the space conditioning needs of a Zero Energy Home. The ZEH Energy Supply Systems Integration project is soliciting proposals from industry and/or university teams for research and development of building components that are integrated with solar and other renewable energy generation technologies.

4. Minimum Criteria for Proposal Acceptance

a. Price Participation

A minimum price participation of at least 20% is required for this RFP. Price participation is defined as a percentage of the total allowable and allocable price under the subcontract, which may be met by contributions by the Subcontractor and by contributions from the Subcontractor's lower-tier subcontractors or suppliers at no cost to NREL. All costs must be allowable and allocable under the terms of the Federal Acquisition Regulations and DOE Acquisition Regulations. Offeror's who propose more than the required 20% will be scored higher. See "Qualitative Merit Criteria for Best Value Selection".

5. Proposed subcontract award and period of performance

It is the intent of NREL to award up to ten (10) firm fixed price Subcontracts under this solicitation. At the completion of the subcontract for the selected Phase, NREL will make the decision regarding whether to fund a project for the next sequential Phase. The decision will be made based on: (a) technical merit of the concept; (b) availability of funds; and (c) Zero Energy Buildings Subprogram priorities.

Current (Fiscal Year 2003) funding availability is approximately \$1,200,000. It is anticipated that total funding available for all projects over all Phases will not exceed \$4,500,000. For projects that begin with Phase I and continue through Phase IV, the expected total period of performance would be approximately 48 months.

6. Competitive negotiated subcontract using Best Value Selection

This solicitation shall be conducted using Best Value Selection that results in an award that is most advantageous to NREL based on the best value combination of (a) evaluated qualitative merit and (b) evaluated price of the offers submitted.

Best Value Selection is based on the premise that, if all offers are of approximately equal qualitative merit, award will be made to the offeror with the lowest evaluated price. However, NREL will consider awarding to an offeror with a higher evaluated price if the offer demonstrates the difference in price is commensurate with the higher qualitative merit. Conversely, NREL will consider awarding to an offeror with a lower evaluated qualitative merit if the price differential between it and other offers warrant doing so.

7. Qualitative merit criteria for Best Value Selection

The Statement of Work (Appendix A) entitled “Zero Energy Home (ZEH) Energy Supply Systems Integration” (see NREL website below) in this Request for Proposals serves as NREL’s baseline requirements that must be met by each offer.

The qualitative merit criteria establish the technical factors that NREL considers valuable in an offer. These qualitative merit criteria are performance-based and permit selection of a higher priced offer that provides higher qualitative merit.

The following qualitative merit criteria will be used by evaluators to determine the technical value of the offer in meeting the objectives of the solicitation.

Each qualitative merit criteria and its assigned weight are provided below.

a. ***Qualifications and Experience of the offeror and its lower-tier subcontractors (50%)***

Offeror’s demonstrated capability to fulfill the objectives of the project through Phase IV, include the following:

- Experience in working with the homebuilding industry
- Ability to sustain the project’s objective over the full performance period (i.e., financially and with respect to appropriate staffing)
- Demonstrated experience and expertise in designing renewable energy technology projects for buildings, designing and operating performance monitoring instrumentation, and analyzing and interpreting the collected data
- Demonstrated experience and expertise in integrating the building envelope, energy efficiency technologies, and renewable energy technologies in a systematic optimized manner in order to achieve an energy use/energy generation goal
- Demonstrated track record for producing high-quality work on time and within budget, as described in the proposal and provided by references and prior experience with the Department of Energy and its national laboratories (if any)
- Qualifications of proposed project staff in relation to their responsibilities under the project
- Composition of offeror’s team to include organizations such as homebuilders, utilities, manufacturers, and/or market research organizations if applicable

b. ***Project Concept and Description (40%)***

The offeror’s concept will be evaluated for the following positive attributes:

- Engineering description of the ZEH integrated energy supply system concept to be investigated in the project and discussion of the major issues, risks and problems that are to be addressed in its development
- Potential energy and environmental benefits and economic market potential of the concept
- Proposed work in the initial Phase (i.e., Phase I, II, III or IV) that meets the objectives of the project. ***If the offeror is proposing to begin with a***

Phase other than Phase I, they must provide the documentation to show that they have satisfied all of the requirements of the bypassed Phase(s)

- Work plan for initial subcontract and completeness of technical approach (i.e., it clearly describes specific tasks, schedule for performing tasks, analytical tools to be used, information resources to be used, and any special beneficial features)
- Project management plan shows effective control over the progress of work as planned

c. **Price Participation (10%)**

Offeror's price participation over and above the minimum required by this RFP (ie., 20% minimum price participation requirement). Note: While there is minimum price participation for all proposals submitted under this RFP, it is expected that the offeror's price participation will increase as the proposed work moves from the initial Phase through Phase IV.

8. Additional Factors for Evaluation

In addition to the qualitative merit criteria above, each proposal will be evaluated against other programmatic factors in making its competitive range determination and final negotiation rank order. These program factors are not weighted and are as follows:

- Geographic diversity among the projects selected
- Diversity of the renewable energy technologies among the projects selected
- Phase of technical development among the projects selected

9. Price Evaluation for Best Value Selection

After evaluation of the qualitative merit criteria and additional factors for evaluation, the following price evaluation will be used to determine the best value of the proposal in meeting the objectives of the solicitation. Note that the combined qualitative merit value will be considered substantially more important than the price.

- Reasonableness of the total price and the individual cost elements that comprise the total
- Reasonableness of the price proposed in relation to the magnitude of work to be performed
- Reasonableness of fully loaded labor rates for all potential phases

10. Evaluation process

NREL will evaluate each of the phase areas independently in two general steps:

Step One—Initial Evaluation

An initial evaluation will be performed to determine if all required information has been provided for an acceptable offer. Offerors may be contacted only for clarification purposes during the initial evaluation. **Proposals that do not meet the minimum criteria for proposal acceptance, as previously described in Item 4 of this RFP will not be accepted and will not be reviewed.** Offerors shall be notified if their offer is determined unacceptable and the reasons for rejection will be provided.

Step Two—Discussion, Selection, Negotiation, and Award

All acceptable offers will be evaluated against the Statement of Work (Appendix A) and the qualitative merit criteria listed above. Based on this evaluation, NREL has the option, depending on the specific circumstances of the offers received, to use one of the following methods of selection:

- (a) make an individual selection, conduct negotiations, and make an award;
- (b) conduct parallel negotiations with all offerors and make award(s);
- (c) conduct discussions with all offerors, select successful finalists, conduct parallel negotiations with successful finalists, and then make award(s);
- (d) conduct discussions with all offerors, conduct parallel negotiations with the finalists, select successful finalist(s), and then make award(s);
- (e) select successful finalists, conduct successive negotiations, and make successive selections and awards;
- (f) make no award(s).

The technical proposals selected will be utilized to negotiate final Statements of Work.

11. Proposal preparation information

- a. The proposal must include a title page, including the RFP title and number, name of your organization and principal investigator (with postal address, telephone and fax numbers, and email address). The title should be succinct and capture the essence of your offer.
- b. Formatting instructions
 - A page is defined as one side of an 8 ½" x 11" sheet of paper.
 - Use a 12-point font.
 - Maintain at least 1-inch margins on all sides.
 - Copies may be either single or double sided.
- c. A **technical proposal** in an original and ten (10) copies directed toward meeting the requirements of NREL's Statement of Work (see NREL website below) and qualitative merit criteria (see item 7 above).

The offeror's entire technical proposal shall not exceed 12 pages (attachments and resumes not included in page count).

- d. A completed Labor Rate Proposal Form in an original and ten (10) copies submitted with the offer for the work described in the Statement of Work (Attachment I). The Labor Rate Proposal Form located on NREL's website is set up for a base year and three option years. The offeror should use the categories of labor provided on the Labor Rate Proposal to enable NREL to establish price reasonableness.
- e. A completed "**Price/Cost Proposal**" form (Attachment II) in an original and ten (10) copies submitted with the offer for work described in the initial phase of the proposal. Follow-on phases need not be priced for this solicitation however, fully loaded labor rates must be provided for all phases (see Attachment I). An individual offeror's price/cost proposal standard format can be used if the data included is substantially the same as the NREL form. The offeror's price/cost and delivery terms must be valid for 90 days from the date of the offer. The price/cost proposal should include support

documentation for all categories of the proposed price/cost. The price/cost proposal should separate price/cost for lower-tier or consultant subcontract(s) and include support documentation for all categories of the proposed lower-tier or consultant subcontract(s) price/cost.

- f. A completed “**Representations and Certifications**” form in an original and ten (10) copies (see NREL website below).
- g. EITHER the “**Organizational Conflicts of Interest Representation Statement**” OR the “**Organizational Conflicts of Interest Disclosure Statement**” (see NREL website below), as applicable.
- h. A cover letter including a **summary statement** indicating acceptance of the proposed Statement of Work or any change with reason (see NREL website below).
- i. A cover letter including a **summary of deviations/exceptions** (if any) to the Subcontract schedule and the standard terms and conditions and/or the intellectual property terms and conditions in the appendices. The offeror shall explain any exceptions (including deviations and conditional assumptions) taken with respect to the subcontract schedule and terms and conditions. Any exceptions must contain sufficient amplification and justification to permit evaluation. Such exceptions will not, of themselves, automatically cause an offer to be termed unacceptable. A large number of exceptions or one or more significant exceptions not providing any obvious benefit to the Department of Energy or NREL may, however, result in rejection of such offer as unacceptable.
- j. This solicitation does not allow the submittal of facsimile or electronic proposals.
- k. This solicitation does not commit NREL to pay costs incurred in the preparation and submission of a proposal in response to this RFP.

12. Solicitation Provisions—full text provided

a. Late submissions, modifications, and withdrawals of offers

Offers, or modifications to them, received from qualified organizations after the latest date specified for receipt may be considered if received prior to award, and NREL determines that there is a potential price (cost), technical, or other advantage, as compared to the other offers received. However, depending on the circumstances surrounding the late submission or modification, NREL may consider a late offer to be an indication of the offeror’s performance capabilities, resulting in downgrading of the offer by NREL evaluators in the technical evaluation process. Offers may be withdrawn by written notice or telegram (including mailgram) received at any time before award. Offers may be withdrawn in person by an offeror or an authorized representative, if the representative’s identity is made known and the representative signs a receipt for the offer before award.

b. Restrictions on disclosure and use of data

Offerors who include in their proposals data that they do not want disclosed to the public for any purpose or used by the government or NREL, except for evaluation purposes shall—

1. Mark the title page with the following legend:
“This offer includes data that shall not be disclosed outside the government or NREL and shall not be used or disclosed—in whole or in part—for any purpose other than to evaluate this offer. If, however, a subcontract is awarded to this offeror as a result of—or in connection with—the submission of this data, the government or NREL shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting subcontract. This restriction does not limit the government or NREL’s right to use information contained in this data if obtained from another source without restriction. The data subject to this restriction are contained on pages [insert page and line numbers or other identification of pages] of this offer”; and
2. Mark each page of data it wishes to restrict with the following legend:
“Use or disclosure of data contained on this page is subject to the restriction on the title page of this offer.”

c. Notice of right to receive patent waiver (derived from DEAR 952.227-84) and technical data requirements.

Offerors (and their prospective lower-tier subcontractors) in accordance with applicable statutes and Department of Energy Acquisition Regulations, (derived from DEAR 952.227-84) have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the subcontract that may be awarded as a result of this solicitation, in advance of or within thirty (30) days after the effective date of subcontracting. Even where such advance waiver is not requested or the request is denied, the subcontractor will have a continuing right during the subcontract to request a waiver of the rights of the United States in identified, individual inventions.

Domestic small business firms, educational institutions, and domestic nonprofit organizations normally will receive the Patent rights clause—retention by the subcontractor—which permits the offeror to retain title to subject inventions, except in subcontracts involving exceptional circumstances or intelligence activities. Therefore, domestic small business firms, educational institutions, and domestic nonprofit organizations normally need not request a waiver.

If an offeror’s proposal includes a lower-tier subcontract to another organization, that lower-tier organization's business type will determine the applicable intellectual property provisions that will apply to the lower-tier subcontract. Note that a lower-tier subcontractor may apply for a patent waiver under the same conditions as the offeror.

Under a research, development, and demonstration project, the Department of Energy and NREL are unable to ascertain, prior to receipt of offers or performance of the project, their actual needs for technical data. It is believed that the requirements contained herein are the basic needs of the Department of Energy and NREL.

However, if the offeror indicates in its proposal that proprietary data will be used or withheld under its proposed effort, the Department of Energy and NREL reserve the right to negotiate appropriate rights to the proprietary data. The appropriate rights may include "Limited Rights in Proprietary Data" and/or "Subcontractor Licensing."

d. Disclaimer

NEITHER THE UNITED STATES; NOR THE DEPARTMENT OF ENERGY; NOR MIDWEST RESEARCH INSTITUTE, NATIONAL RENEWABLE ENERGY LABORATORY DIVISION; NOR ANY OF THEIR CONTRACTORS, SUBCONTRACTORS, OR THEIR EMPLOYEES MAKE ANY WARRANTY, EXPRESS OR IMPLIED, OR ASSUME ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR USEFULNESS FOR ANY PURPOSE OF ANY OF THE TECHNICAL INFORMATION OR DATA ATTACHED OR OTHERWISE PROVIDED HEREIN AS REFERENCE MATERIAL.

e. Solicitation disputes

The General Accounting Office and the Department of Energy do not accept or rule on disputes for solicitations for Requests for Proposals issued by Management and Operating Contractors for the Department of Energy (operators of Department of Energy National Laboratories). Should an offeror have any concerns regarding the NREL solicitation process or selection determination, the offeror may contact Marty Noland, Advocate for Commercial Practices, at (303) 384-7550. NREL will address each concern received from an offeror on an individual basis.

13. Solicitation provisions—incorporated by reference—limited access

This solicitation incorporates one or more solicitation provisions by reference with the same force and effect as if they were given in full text. The following documents can be downloaded from the NREL website at <http://www.nrel.gov/rfps/> or the NREL RFP Contact (see item 2) will make full text available upon request.

- Statement of Work (Appendix A) dated 04/21/03
- Sample Subcontract Schedule
- Labor Rate Proposal Form (Attachment I)
- NREL Price/Cost Proposal Form and Instructions (Attachment II)
- NREL Representations and Certifications for Subcontracts (Attachment III)
- NREL Conflicts of Interest Forms (Attachment IV)

14. Solicitation provisions—incorporated by reference—general access

This solicitation incorporates one or more solicitation provisions by reference with the same force and effect as if they were given in full text. The following documents can be

downloaded from the NREL **general access** website at
http://www.nrel.gov/contracts/rfp_related_docs/index.html.

- NREL Standard Terms and Conditions:
 - Appendix B-3 dated 07/24/00
- NREL Intellectual Property Provisions:
 - Appendix C-1 or Appendix C-2, dated 10/22/98, as applicable

15. NAICS Code and Small Business Size Standard

- a. The North American Industry Classification System (NAICS) code [formerly standard industrial classification (SIC)] for this solicitation is 541710 .The small business size standard for 541710 is 1,500 or fewer employees.